

SCIENCE & EDUCATION Impact

Benefits from USDA/Land-Grant Partnership

The Thin Line between Obesity and Nutrition

Eating right, exercise key to preventing disease, controlling health care costs.

Obesity and its complications – including hypertension, heart disease, and diabetes – consume about 10 cents of every U.S. health care dollar and cause as many as 300,000 deaths each year. In the past 20 years the number of overweight American children has nearly tripled. Land-grant universities collaborate with USDA to offer educational programs and research to address the issue.

Payoff

- **Preventing disease through education.** The Expanded Food and Nutrition Education Program (EFNEP), a national nutrition effort implemented by the Cooperative Extension System, is improving diets among disadvantaged Americans and helping prevent high blood pressure, heart disease, diabetes, and obesity. While low-income people often don't consume enough key nutrients – including protein, iron, calcium, and vitamins A, C, and B6 – recent data show EFNEP participants nationwide increased their intake of these nutrients by 5 to 50 percent. Participants also improved their diets. Of nearly 74,000 surveyed, 87 percent now make healthier food choices, prepare foods without added salt, read nutrition labels, or make sure their children eat breakfast. Cooperative Extension offers EFNEP programming in nearly every state. Studies at **Virginia** and **Iowa State** show that every \$1 invested in EFNEP returns \$10 in reduced health care costs.
- **Raising fit kids.** The Children's Health Summit — Fighting Back Against Childhood Obesity — sponsored by **Rutgers** Extension, targeted teachers, nurses, dietitians, social workers, and other health professionals with information on childhood obesity. Three-fourths of participants said they would choose healthier snacks for youth events, and 87 percent would encourage children to eat a balanced diet and to be more active. **Nevada** Extension partnered with The Fraternity of Executive Chefs of Las Vegas to develop nutrition education for at-risk 6 to 8 year olds, who went on to choose healthier snacks. **Nevada** also developed Tummy Talks – books about self-regulation of food intake for preschool children. **Connecticut** researchers are looking at the relationship among diet, exercise, and protein metabolism in healthy obese and healthy lean children. The information is being used to develop appropriate diet and exercise guidelines for children.

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- **Got milk? Get fit.** Nine- to 14-year-old girls who consume just half the recommended allowance of dairy products have lower weight and girth than girls who eat even fewer servings, according to **Hawaii** research. Scientists found that equally active girls at the same growth stage who ate the same number of calories weighed on average 2 pounds less and had half an inch less belly fat if they drank one more cup of milk than their counterparts. An extensive assessment of childhood obesity by **Alabama** Extension confirmed this, showing children who drank more milk and consumed more calcium-rich foods had lower body weights.
- **The lunch lady, vending machine blues.** School lunch menus need shaking up to improve student nutrition and eating habits, a **Kentucky State** study showed. In looking at plate waste and lunch choices, researchers found sixth graders threw away one-third of the fruits and vegetables and one-fifth of the entrees. A third of the sixth graders bought soft drinks or snacks. They ate 1.5 times the fat and twice as much sugar as their counterparts but consumed less iron, calcium, fewer vitamins, and less fiber. Researchers concluded that school lunches need to taste better and be more appealing. No doubt the sixth graders agreed. **Cornell** Extension went to 20 worksites to improve company cafeterias, vending machine choices, and physical activity. These companies now offer weight loss programs, walking groups, and heart-healthy foods to their more than 7,000 employees.
- **Sweet prevention.** While diabetes afflicts 18 million Americans and costs an estimated \$123 billion, it often can be controlled through lifestyle changes. **West Virginia** Extension's Dining with Diabetes and On the Road to Living Well with Diabetes offer education, recipe tips, and, in conjunction with the Joslin Diabetes Center in Boston, self-care information, blood pressure screening, and blood tests. Participants learned self-management skills, improved eating habits, and appropriate portion sizes. **Delaware**, where one in 20 people has diabetes, adopted the program as well. **Illinois** researchers have discovered that a carbohydrate – pullulan cyclodextrin – can decrease spikes in blood sugar levels. **Texas A&M** offered Do Well, Be Well with Diabetes in 100 counties. Average blood sugar readings among participants dropped from 143 mg/dl to 135 mg/dl by the end of the 12-class series. In **Nevada**,

Extension's An Ounce of Prevention program targeted Hispanics, African Americans, and Native Americans who are at higher risk of developing diabetes. Participants increased their physical activity and reduced dietary fat intake. By helping prevent diabetes in 800 clients, the program saved \$5 million in medical costs.

- **Disease prevention.** More than 50 million Americans have hypertension, with African-Americans and Hispanics disproportionately affected. **Prairie View A&M** launched Project HOPE (Hypertension Outreach Prevention Education), enrolling more than 5,000 participants from 13 counties in partnerships with faith-based institutions. Participants said they had reduced the amount of salt in their diets, understood the link between obesity and hypertension, and were now more likely to have their blood pressure checked. **South Carolina State** partnered with the Medical University of South Carolina to educate limited-resource audiences about health issues associated with hypertension, diabetes, high cholesterol, obesity, and related ailments. Of those who participated, 73 percent exercise more often and plan to change their eating habits.
- **Just do it.** Lack of regular exercise contributes to a variety of health problems. In **Georgia** a nutrition and exercise program called Walk-A-Weigh resulted in an average 3-pound weight loss among participants in five weeks. Most participants also reduced their blood sugar, blood pressure, and cholesterol. In **Iowa**, the Lighten Up Iowa program saw 8,000 adults and 2,700 youth walk a combined 2.6 million miles and lose 23.5 tons of weight. A similar program coordinated by **Kansas State** got 12,000 people walking.



**Cooperative State Research, Education,
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